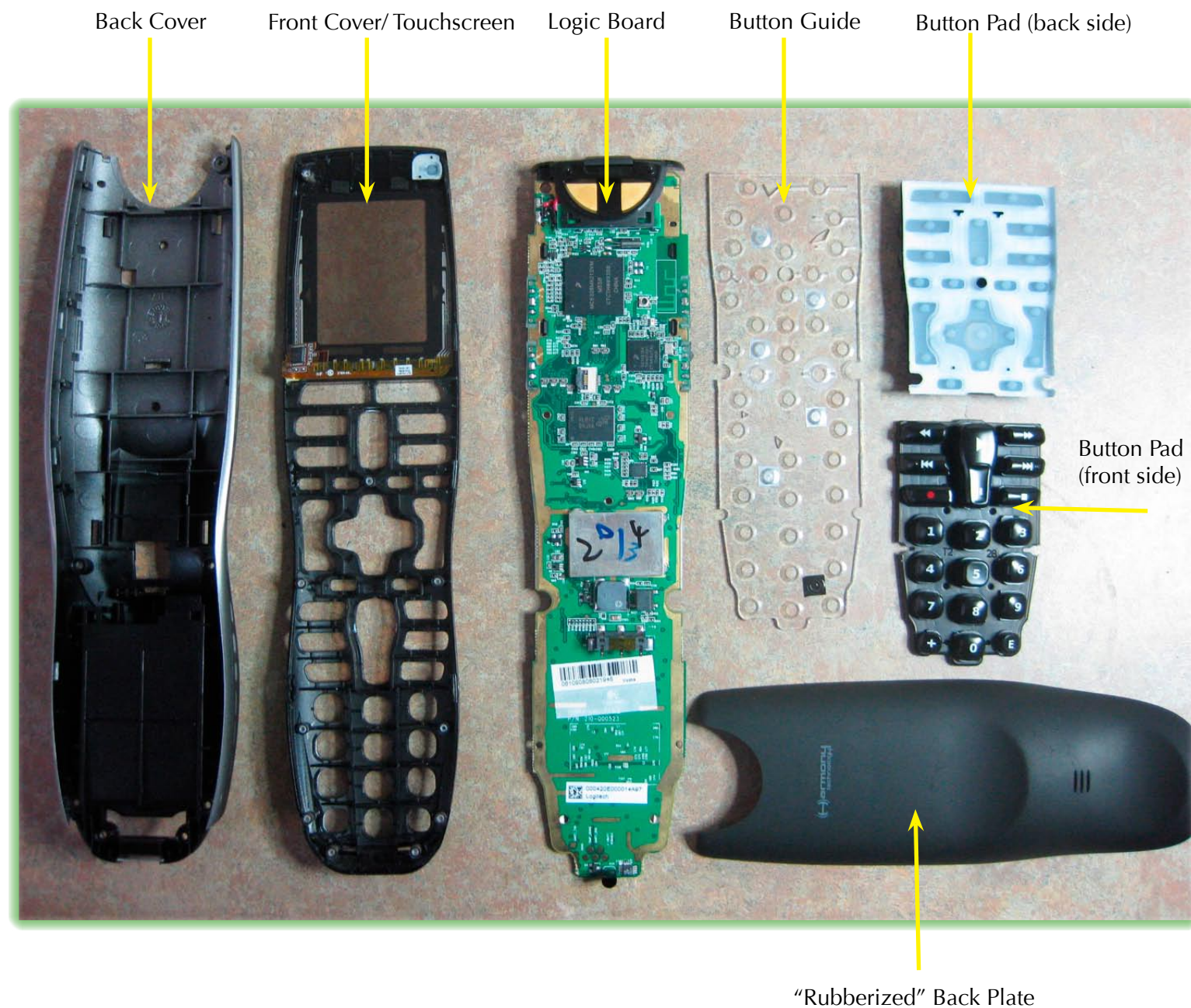


How to install your new Harmony 900 Front Cover/Touch Screen

Important! Before you begin working on your Harmony 900, you must discharge any static electricity you may be carrying around. Ideally, you should wear an anti-static wrist strap as you work. If you do not own an anti-static device, at least touch a grounded appliance (the metal on the back of a computer tower works well) before you begin working. The components inside the H900 are sensitive to static electricity so it is very important to take these precautions!

Before you get started, familiarize yourself with the parts pictured below.



Disassembly Procedure



1. Remove the battery compartment cover. There are four screws in this area that need to be removed. Two are immediately visible on either side of the serial number sticker. Remove them with a small Phillips head screwdriver and set them aside. There are also two hidden screws *under* the sticker (if there is no sticker, all four screws are visible). To remove the sticker, use an x-acto blade or razor to get underneath one of the corners and peel it up gently. Once you get it started, you can use tweezers or small pliers to peel it off. If you are careful, you can lift the sticker and still be able to re-apply it later. Remove the two screws and set them aside.



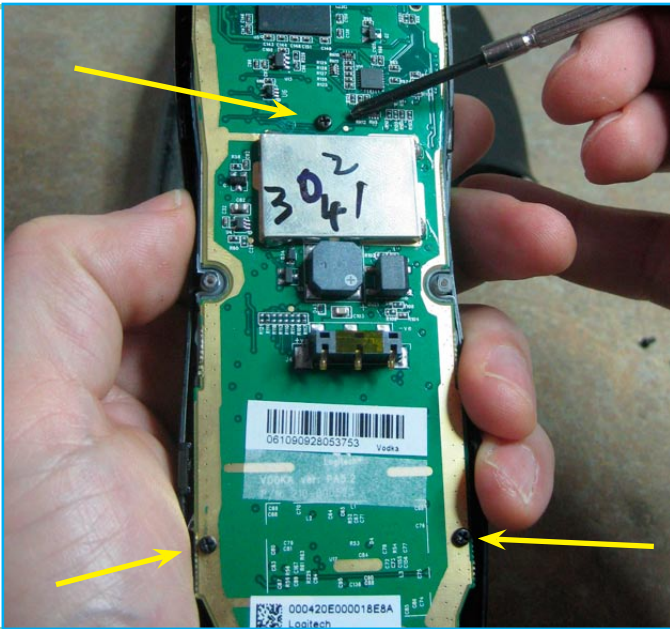
2. Now it is time to remove the black 'rubberized' back plate. This looks like soft rubber but it is actually a hard piece of plastic. Start at the top using a small pry tool and pry up the left corner. Then, move to the top right corner and pry that up as well. Once the two top corners are free, you can move the pry tool to the middle and, like a lever, bury it deeply and pull gently forward, prying the back plate towards you. This is not an exact science and you may need to experiment and pry in a few different places. You may also pry at the sides and use your hands to keep the piece from locking itself back in its side grooves. There is a tab in the middle/center of the plate that will offer some resistance so the plate may come free suddenly. The only thing you need to really be aware of is that, on some H900's, there is a sticky piece of double-sided tape at the very bottom of the plate (just below the raised dot). So, if the plate seems to come free but appears stuck in this area, use your pry tool to 'peel' the plate off of the tape. Once the plate is off, we can move to the next step.



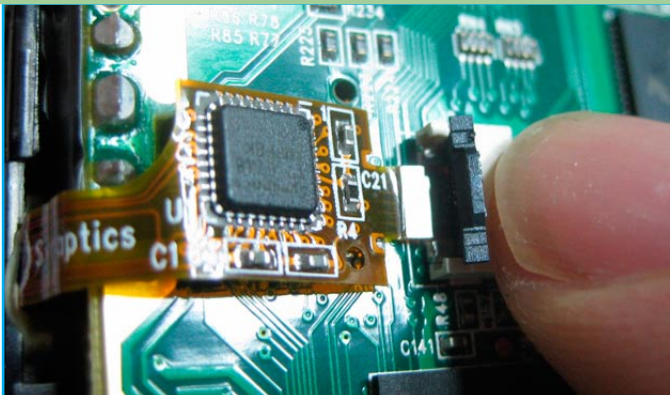
3. Removing the plate will expose three screws; one at the top left and two at the bottom on either side. These screws are the same size as the ones you already removed. So, use your Phillips head screwdriver and place these screws with the others.



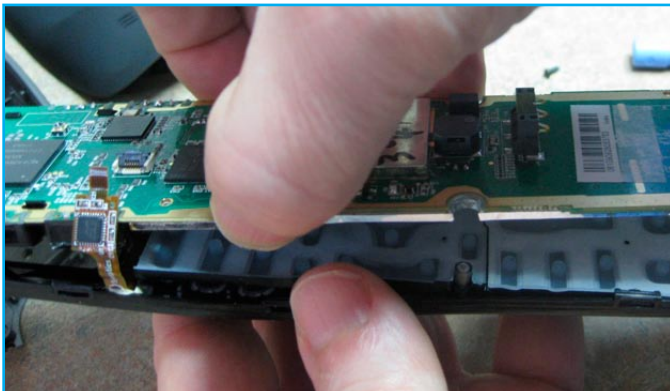
4. Now, this is probably the trickiest part of the disassembly. It is time to separate the two clamshell halves of the 900. A larger bladed pry tool is best for this work. Start with the remote face-up in your hand and take the pry tool and force it into seam of the clamshell casing at the *top* right-hand corner. Once you get the tool into the remote, pressing down and slightly pulling the silver casing outward, slide the blade down the side of the remote. This will usually pop some of the locking tabs, but not always all of them. *You may need to do this more than once.* If only some of the tabs disengage don't be concerned. Do the same procedure on the other side. It may be easier for you to rotate the remote around so that you are sliding the pry tool away from you. Alternate sides until the front/body of the remote separates completely from the back cover. Sometimes it helps to pull the back cover slightly as you do this. Just don't force anything. Be patient and use the pry tools. Note that when the back comes free, nothing will fall off the remote! The logic board is still screwed tightly to the front cover, so you don't need to be concerned with parts falling off as you separate the pieces. The only exception is that sometimes the small plastic 'window' that covers the learning port at the back of the remote will fall off. So, make sure you do the disassembly in a place where you will be able to find this almost invisible piece should it fall! When you are done, the back cover of the 900 can be set aside and you are left with the front cover touch screen and logic board.



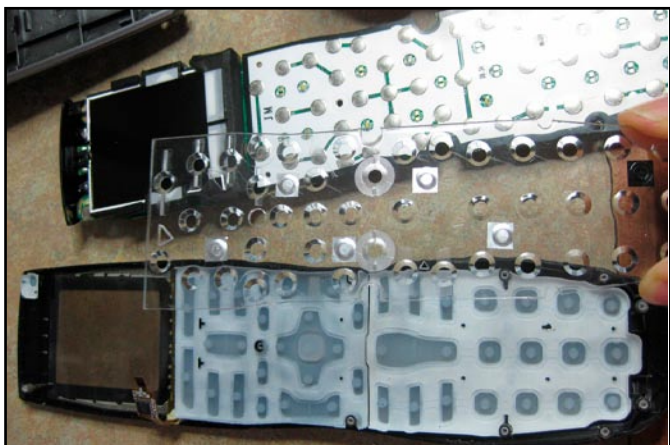
5. Turn the remote so that the logic board is face up. There are three screws that need to be removed so that the front cover can be separated from the logic board. Two of the screws are near the bottom of the remote on either side and the third screw is almost dead-center just above the large silver-colored component cover. *These screws are shorter than the screws you removed previously so do not mix them up.*



6. Now, the only other thing that needs to be done before the logic board can be removed from the front cover is to unclip the touch screen ribbon cable. Flip the black connecting clamp up and back. Do it gently and carefully since it can sometimes detach from the connector and be difficult to put back on. Slide the ribbon cable out.

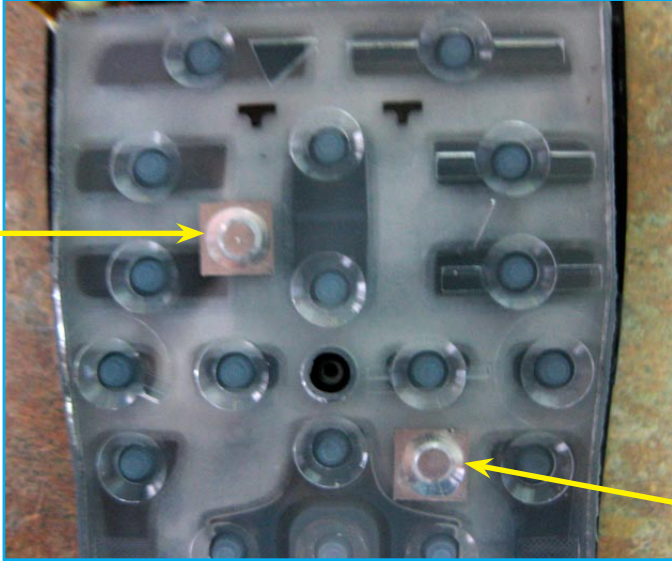


7. To remove the logic board, simply lift it up. It may stick a little at the top left where there is a 'soft' connection (a hole in the board with a mounting post through it). Just wiggle it a little and it will come free. Now, depending on how you grabbed it, only the logic board will come free, or the logic board and the plastic button guide template and/or the button pads. Either way, all these components simply go back together and sit on top of one another – no screws, glue, etc. If the plastic button guide sticks to the logic board when it comes out, or if it stays on top of the button pad, either way is fine. Just make sure that if you separate all the components that the plastic guide is re-installed in the correct way (see reassembly pictures). The button pads lift right off.

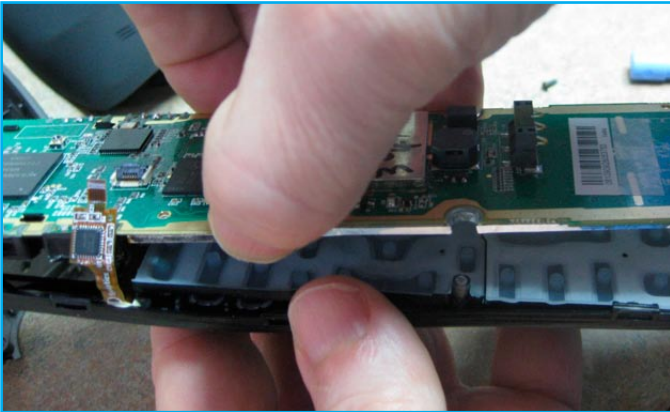


Disassembly is now complete!

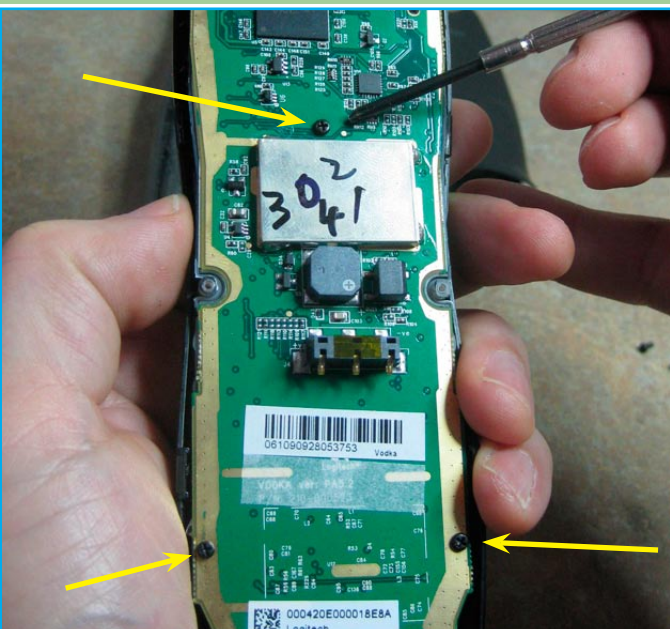
Reassembly Procedure



1. Take the button pads from the old face plate and move them onto the new one. Just drop the two pads right in and pat them down, making sure that they are fully inserted. Also make sure that the on/off button is oriented the correct way. There are two tiny holding pins (part of the front cover) that are actually inserted into the on/off button pad to help hold it in. Turn the front cover face up to verify that the button is in correctly. Now, if the transparent plastic button guide *is not* attached to the logic board and is just another part on the table, then place it on top of the button pads. **Make sure that the plastic guide is not upside down.** The bevel side should be face-up so that each button appears to be in the center of a crater with sloping sides. Another way to tell is that most (if not all) of the square reflecting pads on the guide should have the silver side facing up.



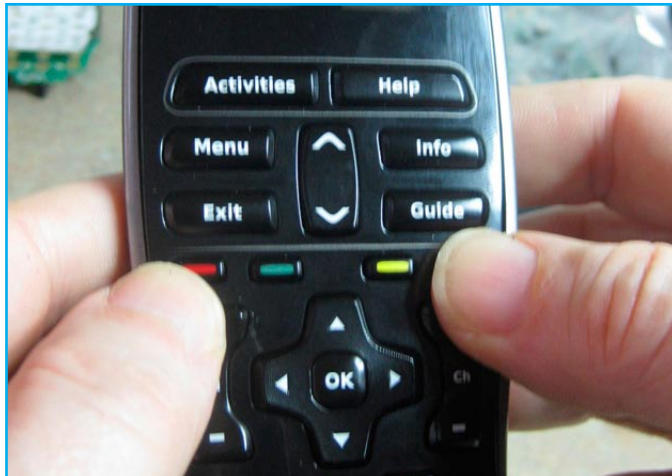
2. Now drop the logic board back on top of the button pad (or button guide if not attached to the board). Make sure that the post at the top of the front cover has been fully inserted into the hole in the logic board. Push down gently on the board and reach your hand around to the front and click the buttons so you can feel if the board and front cover are aligned correctly.



3. Re-insert the ribbon cable into the connector. Push it all the way in and close the connecting clamp slowly and carefully. If you close the clamp quickly or aggressively, it may come forward too far and actually detach from the connector. You can reinstall the clamp, but it can be difficult to do. If this happens to you, pull the ribbon cable out before you attempt to reseat the clamp.
4. With the ribbon cable installed, replace the three shorter screws that you removed before. **Make sure they are the shorter screws!** At this point it is a good idea to turn the remote face up and simply press the keys and test that they seem to be aligned correctly and have the appropriate tactile response.



5. With the logic board face up, take the back cover plate (silver and black – not the 'rubberized' piece) and align it with the board. You can verify alignment by seeing that the screw hole at the top left of the back cover is directly over the mounting post at the top of the logic board. The next part is a little tricky. What you want to do now is press the front and back pieces back together. So, holding the remote with both hands press the front and back pieces together starting at the top.



6. Once the top has been engaged (even if not completely), turn the remote face up and continue pressing the front and back together – moving down towards the middle and then the bottom. You should hear and feel the locking tabs snapping together and engaging. Once you are done, inspect the edges very closely to see if a locking tab did not engage.



There should be no gaps between the back cover sides and the front cover and the surface of the touch screen should be virtually flush with the silver sides. If you see any part that is raised or there is a gap at the sides, apply gentle but firm pressure at that point until the front and back covers snap together.

At this point, you can test the installation before going any further. Insert the battery and allow the remote time to boot-up. Test the touch screen. If all is well, remove the battery and continue with re-assembly.



7. Replace the three screws that firmly attach the back cover to the logic board. Then, you are ready to reinstall the 'rubberized' back piece. This piece just snaps back in. Align the piece with the back of the remote and press firmly at the top. Move to the middle and press again. You should feel and hear very definite engagement. Press firmly along the sides and length of the piece to ensure that all tabs have been engaged. Then, inspect the edges. If it appears that a side tab did not fully engage, simply press the spot sideways and it should click right in. There should not be any spaces between this piece and the body of the remote.



8. Install the remaining four screws back in the battery compartment and, if desired, re-apply the serial number sticker. If it came off cleanly there is generally enough glue to stick it back on.

Do a final test to make sure everything works as expected. Feel free to contact me if you have any questions. I'm always happy to help.

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